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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/719,136	12/07/2000	Malcolm Barry James	COLLI-P-30/5	5715
7590		09/07/2006	EXAMINER	
Lackebach Siegel		LUK, EMMANUEL S		
One Chase Road		ART UNIT		
Scarsdale, NY 10583		PAPER NUMBER		

1722

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/719,136

Applicant(s)

JAMES, MALCOLM BARRY

Examiner

Emmanuel S. Luk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-20,25-31,33-39 and 41-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33-35,44 and 45 is/are allowed.
- 6) ☒ Claim(s) 18-20,25-31,36-39 and 41-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date 20060905.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 18-20, 25-31 and 35-39, 41-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Kostura (4072181) in view of Cavazos (5167688).

Kostura teaches an apparatus for regulating the temperature of a mold (10), the apparatus having two conduits (12, 14), the chamber is the portion of the conduit within the mold (10) that exchanges heat with the mold, at least a portion of the chamber conforms with the shape of the mold surface (Fig.), wherein one of the conduits leads to a cooling condensing means (20), and the vapor returns to liquid. Kostura also teaches heating means (51) and a sensor (52) for controlling the temperature of the mold.

Kostura fails to teach the return conduit operates by gravity.

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Kostura teaches the use of a pump (40) that allows for the condensed water to return towards the chamber thereby bypassing the need to use gravity to ensure the fluid returns back to the chamber.

Cavazos does teach how the liquid can return via gravity within the system.

It would have been obvious to one of ordinary skill in the art to modify Kostura with the placement of the system to allow for gravity to return to the chamber. However, the pump in Kostura ensures the material return in any placement of the condenser, thereby allowing for different structural configurations which would save on space depending on the work area.

In regards to the liquid and vapor states of the heat exchange material within the system, this is merely functional limitations to the state of the material and the structure of the apparatus is taught by Kostura, the structure merely need to be capable to allow the materials to operate in the desired manner. In regards to the completely closed chamber, the structures are capable of remaining closed in operation, thereby the prior art teaches the claimed invention. Additionally, the specification of the instant application discusses the use of a gate valve that is used in the start-up of the apparatus. This means the invention is capable of operating without being in a completely closed system.

In regards to claims 21-24, these are intended use of the mold. Kostura and Cavazos clearly teaches a system for cooling a mold system, and the mold is well known for use in the shaping of materials. That the material can be metal, plastic materials only depends on the material used for making the mold due to the

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temperatures of the molten materials. Both references are capable of molding a variety of materials and it is an intended use of the structure to mold the metal or plastic aterials

In regards to claim 43, Kostura teaches a heater to heat the liquid in the system, it can also be placed in the chamber to ensure the desired liquid temperature rather than preceding (50) the chamber. Kostura also teaches a sensor (52) for determining the temperature of the mold that in turns controls the heater (51) in order to adjust the temperature of the liquid (Fig.). It would have been obvious to one of ordinary skill in the art to modify Kostura with the heater being moved to the chamber as it is a rearrangement of the heater to be closer to the sensor.

### ***Response to Arguments***

Applicant's arguments filed 9/21/05 have been fully considered but they are not persuasive. The arguments by the applicants have been considered. However in regards to the liquid portion within the chambers, the Kostura and Cavazos references teaches the closed chamber system that is situated within the mold. The claimed apparatus provides no further structural limitation to the closed chamber in relation to the mold. The arguments concerning the uniform temperature and constant temperature across all surfaces of the chamber is considered, however, for the system itself which is considered to be an apparatus claim, there are no further structural limitation provided for this to be taken into account.

There is no claim 46 in the records even though applicant's remarks have suggested a new claim 46.

***Allowable Subject Matter***

4. Claims 33-35, 44, and 45 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach a method of cooling the mold die and articles wherein the mold having a completely closed chamber having the chamber filled with the liquid and then extracting a portion of the liquid, the liquid passes through a condensing means for cooling, condensing, the vapor, the liquid returns to the chamber to return the space by gravity.

***Conclusion***

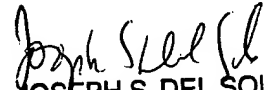
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (571) 272-1134. The examiner can normally be reached on Monday-Fridays from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EL

  
JOSEPH S. DEL SOLE  
PRIMARY EXAMINER  
9/5/06